skin tests, complement-fixation reactions and other serologic procedures. The fungi again refuse to abide by the rules and create further problems for the immunologist. The present state of affairs may be summarized by saying that the *specificity* of serologic reactions remains to be proved, and that the *reliability* of serologic procedures has not been adequately demonstrated. In California we are particularly interested in the "skin test" for the diagnosis of Coccidioidal infection. Recent experimental work at the University of California indicates that all is not well with this test. Patients who have been proved to have Coccidioidal granuloma by culture, by animal inoculation and by pathologic examination, have repeatedly failed to give positive skin reactions with standard preparations of Coccidioidin, while other patients have given positive reactions with the same preparations. Guinea pigs have been inoculated with different cultures or strains of Coccidioides, and antigens have been made from these cultures. All animals have died with the typical lesions of Coccidioidal granuloma. The striking result has been that positive skin tests were obtained in these animals only when they received injections of coccidioidin made from the particular strain with which they were infected. Some cross reactions did occur, but they were mild and transitory. This suggests that we must use polyvalent antigens in making our tests. But the question immediately arises, "How many strains must be put into the antigen?" That question cannot be answered until we know how many strains of Coccidioides there are and what cross reactions take place.

After considering the three questions that have been raised, we arrive at this conclusion: Molds play their own game according to their own rules, and we have not yet learned how to "play ball" with them.

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SCHOOL PHYSICAL EXAMINATIONS

Discovery of Defects Not the Only Value of the School Physical Examination.—It is too often assumed that the detection of physical defects is the only objective of the periodic examination of school children. Undoubtedly, this is one of the most valuable features of this procedure, and when the discovery of defects is promptly followed by measures for correction, an immense amount of good is accomplished.

School Physical Examination of Value as a Health-Education Experience.—There are, however, many other values inherent in this examination. The physical examination of school children by a school physician is health-education experience of major importance. In the first place, a favorable attitude is developed toward the fundamental idea of having one's health appraised by competent physicians at regular intervals. The dental profession has made commendable progress in educating the public to prevent dental trouble by consulting the family dentist at regular intervals. One of the next great steps forward in preventive medicine will be made when the public are brought to realize that a periodic check-up of nutrition, heart, lungs, kidneys, etc., by the family physician is just as important as the biannual visit to the dentist.

In the second place, favorable attitudes toward health itself may be established. The school physician does not merely point out the defects which are discovered, but rather commends the fine points in the physique of the child who is being examined. Very often a small spark of self-respect is thus fanned into a glowing purpose to achieve optimum health. Many physical imperfections, especially those that result from faulty health habits, may be corrected by presenting to the child a health ideal, and describing in simple terms the road by which this ideal may be attained. In the physical examinations of school children the school physician has the advantage over all other school health workers, inasmuch as he is a doctor and as such speaks with authority on health matters. Even as early as the kindergarten age most children have been conditioned to accept the authority of physicians on matters of health. This creates a great opportunity and a great responsibility.

The Carry-Over Value of the School Physical Examination.—In recent years our school program is being evaluated on the basis of its carry-over value into adult life. The public are asking, "Are the school educational experiences fitting our young people to step out into life and meet its challenges?" The school physical examination is educating our children to keep their bodies fit by living in accordance with the laws of health and by seeking advice at regular intervals from competent physicians and dentists. This is "carry-over" of an enduring character.

School Examinations Help to Indicate Health Values of the School Program.—Furthermore, as Chenoweth and Selkirk have recently pointed out, "even though competent service is given some children by personal physicians, the school examinations are still of value in giving a picture of the health of the school as a whole, and in showing the effect of the school program for good or ill. They may indicate the need for radical reforms in such matters as hours of attendance, periods of rest and relaxation, the school midday meal, the amount of home work, and other parts of the program."[1] The other parts of the program referred to above might well include the physical education program. The physical examination of school children, if adequately performed, should provide information as to the soundness of these activities. Are we placing the emphasis on the right type of activity? Are the present basketball rules resulting in a game which is too strenuous for the adolescent boy? Are too much time and effort being devoted to football? Would emphasis on other athletic activities have greater health values? Help in solving these problems should be obtained from careful physical examinations by skilled school physicians.

The Function of the School Physician Is Health Supervision and Health Education.—School phy-

[1] Chenoweth and Selkirk: School Health Problems, p. 154. F. S. Crofts & Co., Inc., New York, 1937.

sicians are sometimes criticized for not making definite diagnoses in connection with obscure conditions affecting school children. The public forgets that private physicians in similar cases only make a diagnosis after a complete physical examination, together with most exhaustive laboratory investigations. School physicians, from the nature of their work and experience, become expert in observing the normal growth and development of children. They are alert to detect slight deviations from normal, the earliest symptoms of physical abnormality or disease. In such cases only time or the complete laboratory service at the disposal of the family physician or clinic will elucidate the diagnosis. The school physician is not in the school to take the place of either the family physician or the clinic physician; he is there to guide the children along the road to health. Along this road the family physician and dentist are exceedingly important in providing personal supervision of health and physical rehabilitation by treatment when necessary.

Chenoweth and Selkirk have admirably analyzed the situation as follows: "The school examination aims not at making diagnoses, but at pointing out the need for medical supervision when necessary. Its purpose is not to provide advice as to treatment even for the indigent class, since this consumes too great an amount of time and is more efficiently handled by other means. The health examination is essentially an effort in health education to establish suitable attitudes in the child and his parents, and to act as a motivating force for healthful living. By the school examination, however, masses of children are examined who would otherwise be passed by, a multitude of defects are discovered which would otherwise pass unnoted, and correction is instituted in vast numbers of cases." [2]

Physical Findings of Physicians of Value to the Classroom Teacher.—A great deal of the value of the school physical examination may be lost if the information obtained by the school physician is not made available to the teachers. Every effort should be made through health coördinators, or someone functioning in that capacity, to see that the findings of the school physicians are passed on to the classroom teacher. Defects of vision, hearing, heart, and malnutrition, etc., create classroom situations and problems which can only be handled intelligently when the information obtained by the physician is made available to the teachers.

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2 Chenoweth and Selkirk: School Health Problems, p. 155. F. S. Crofts & Co., Inc., New York, 1937.

In these days, half our diseases come from the neglect of the body in the overwork of the brain. In this railway age the wear and tear of labor and intellect go on without pause or self-pity. We live longer than our forefathers; but we suffer more from a thousand artificial anxieties and cares. They fatigued only the muscles—we exhaust the finer strength of the nerves.—Bulwer.

With stupidity and sound digestion men may fret much; but what in these dull unimaginative days are the terrors of conscience to the diseases of the liver.—Carlyle.

ORIGINAL ARTICLES

PROBLEMS IN THE DIAGNOSIS OF ACUTE APPENDICITIS*

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DISCUSSION *by E. H. Eiskamp, M. D., Watsonville; John Homer Woolsey, M. D., Woodland.*

FAILURE to diagnose acute appendicitis promptly and correctly was the subject of the chairman's address by the senior author[1] before the Section on General Surgery of the California Medical Association in 1926. A review of 449 cases of acute appendicitis seen in our practice during the past ten years offers unhappy evidence that surgical intervention is still too often delayed by faulty diagnosis. The seriousness of a situation which results in high mortality rates during so recent a period indicates vividly the need for continued attention by the profession to this whole matter. It is our purpose, therefore, to review in some detail the results of our study of the ten-year case series, in the hope of pointing out some of the pitfalls actually encountered in day-to-day practice.

CLINICAL MATERIAL FOR THIS STUDY

Of the 449 cases, all but three were proved by histological examination. In the three exceptions, operation was limited to drainage of abscesses without removal of the ruptured appendix.

In 129 cases, or 26.9 per cent of the series, the appendix was ruptured at the time of operation. Thirty patients died, a mortality rate for the series of 6.7 per cent. Twenty-six of the thirty deaths occurred among the 129 patients with ruptured appendices, a mortality rate for this group of 20.2 per cent. Among 320 unruptured cases there were four deaths, a mortality rate of 1.25 per cent. Actually, only one of these four deaths, a case of pulmonary embolism occurring in a thirty-eight-year-old male, can fairly be attributed to the operation. The remaining three deaths were due to the following causes: Myocardial failure in a man, seventy-nine; cerebral hemorrhage in a woman, sixty-seven years old; and suicide on the tenth day of an uncomplicated postoperative course by a forty-six-year-old male. Nevertheless, taking the uncorrected figures as they stand, the contrast is impressive enough.

Obviously the referring physicians were not responsible for all delayed and ruptured cases. Too familiar is the patient who has been ill three, four, or more days before he calls his family doctor. Equally familiar is the patient, or family, who refuses surgery, or delays accepting it until many days have passed. Furthermore, there are cases in which the morbid process is so fulminating that the appendix ruptures before the promptest of diagnoses and intervention can take place.

* Read before the General Surgery Section of the California Medical Association at the sixty-seventh annual session, Pasadena, May 9–12, 1938.